

REMARKS

Reconsideration and the timely allowance of the pending claims, in view of the following remarks, are respectfully requested.

In the Office Action dated 11/06/2006, the Examiner rejected claims 2, 3, 12-32 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regards as the invention. In response, Applicants have amended claims 2, 12-16, 22 and 32 to provide a clearer presentation of the claimed subject matter and respectfully submits that these amendments recite sufficient claimed elements to perform functions set forth in the claims and also provide proper interconnections between the claimed elements. Applicants submit that no new matter has been introduced. Furthermore, in addition to these amendments, since dependent claims 3, 17-21, and 23-31 inherit all the features of independent claim 2, Applicants requests the Examiner to withdraw the 35 U.S.C. § 112 rejections with respect to claims 2, 3, 12-32.

In the Office Action dated 11/06/2006, the Examiner rejected claims 2, 3, 12-20 and 22-32 under 35 U.S.C. 103(a) as being unpatentable over Kinugasa '426 (U.S. Patent No. 5,475,426) in view of Oshikiri '527 (U.S. Patent No. 5,491,527); and rejected claim 21 under 35 U.S.C. 103(a) as being unpatentable over the above mentioned references, and further in view of Wakai '919 (U.S. Patent No. 7,019,919).

Applicants respectfully traverse these rejections, for the reasons presented below.

I. Prior Art Rejections Under §103(a).

Applicants' independent claims 2, 12-16, 22 and 32 positively recite, *inter alia*, a reflection-type variable optical-property element, a driving circuit for driving the reflection-type variable optical-property element, and a arithmetical unit that performs calculation on basis of an output of the image sensor and the electronic zoom data, wherein the calculation generates a control signal. The control signal provides a basis for changing a part of an optical system, specifically a ray deflecting function of the reflection-type variable optical-property element by driving the driving circuit.

These claimed features are amply supported by the embodiments disclosed in the written description. (*See, e.g.*, Specification: page 11, line 25 – page 13, line 15, FIG. 1). For example, in an embodiment, the written description discloses a variable mirror which includes a deformable three-layer structure with thin film layer 409a whose surface layer constitutes a reflecting surface. The written description further discloses, a driving circuit 304 that is connected to an arithmetical unit 414 which calculates the configuration of thin film layer 409a subjected to deformation in the electronic zoom and outputs a control signal in accordance with the result of the calculation.

With this said, Applicants submits that, in contrast to the Examiner's assertions, none of the asserted references teach or suggest each and every element of independent claims 2, 12-16, 22 and 32, including the features identified above.

Kinugasa '426 discusses an electronic zoom system wherein a video signal output from a image pickup element 1 is input to a zoom operation processing circuit 3 for magnifying the video signal by a magnification factor of β/α ; wherein the video signal and an addition coefficient provided for signal interpolation are preset in accordance with a result of successive addition of β/α . As such, Kinugasa '426 merely discloses a system that performs zooming operations on an image signal and fails to teach or suggest an optical system having a reflection-type variable optical-property element which is driven by a driving circuit, as required by independent claims 2, 12-16, 22 and 32. Furthermore, there is no suggestion whatsoever in Kinugasa '426, of generating a control signal based on calculations performed on the basis of an output of the image sensor and the electronic zoom data, and driving the driving circuit of the reflection-type variable optical-property element based on the control signal.

Oshikiri '527 discusses a trimming camera having a taking lens and capable of trimming photography. The trimming camera recognizes trimming information including trimming magnification and controls the surface configuration of an optical element for correcting aberrations. The Examiner asserted that Oshikiri '527 discloses the use of liquid crystal lenses to correct aberrations when changing magnification by trimming (*See*, Office Action: page 2). However, artisans of ordinary skill will appreciate that, liquid crystal lenses

are not a reflection-type variable optical-property element, but merely a transmission-type element. Furthermore, there is no suggestion in Oshikiri '527 in its entirety, of an arithmetical unit performing calculations on the basis of an output of the image sensor and the electronic zoom data and generating a control signal to control the reflection-type variable optical-property element based on these calculations.

Thus, Oshikiri '527, is incapable of curing the deficiencies of Kinugasa '426 identified above. For at least these reasons, Applicants submit that none of the asserted references, whether taken alone or in reasonable combination, teach or suggest the claimed combination of elements recited by amended independent claims 2, 12-16, 22 and 32. Accordingly, Applicant submits that Applicants' independent claims are patentable and request the immediate withdrawal of the prior art rejections of claims 2, 12-16, 22 and 32. And, because claims 3, 17-21, and 23-31 depend from claim 2; claims 3, 17-21, and 23-31 are patentable at least by virtue of dependency as well as for their additional recitations. Accordingly, immediate withdrawal of the prior art rejections of claims 3, 17-21, and 23-31 is also respectfully requested.

Applicants further submit that Applicants' claimed invention and Wakai '919, were, at the time the invention was made, owned by Olympus Corporation or subject to an obligation of assignment to Olympus Corporation. Hence, Wakai '919 is disqualified as prior art against Applicants' claimed invention under 35 U.S.C. 103(c). Accordingly, immediate withdrawal of prior art rejection of claim 21 is also respectfully requested.

I. Conclusion.

All matters having been addressed and in view of the foregoing, Applicants respectfully request the entry of this Amendment, the Examiner's reconsideration of this application, and the immediate allowance of all pending claims.

Applicants' Counsel remains ready to assist the Examiner in any way to facilitate and expedite the prosecution of this matter. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the Undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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